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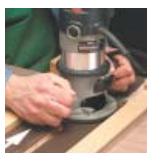
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router workshop
DADOES & GROOVES



Dadoes and grooves are the bread-and-butter cuts in woodworking — not flashy, just strong and easy to make. Dadoes are cut across the grain of the workpiece and grooves are cut with the grain. And I usually use my table saw to cut them. Unless the workpiece is long and awkward. That's when I reach for my router.

There are several reasons why using a router makes sense for dados (or grooves). One benefit is that a straight bit makes a precise cut to an exact width. It also leaves a flat-bottomed groove with almost no chipout. So if your joint is exposed, you will have a tight, gap-free joint. And, with a router, you can easily fine-tune the size for a perfect fit.

A Simple Jig. To guide the router for straight, square cuts, I made a jig that looks like a drafting T-square. In the drawing below, you can see how the jig is built.

Besides holding the fence square to the workpiece, the jig also has an alignment notch cut into it. This notch shows you exactly where to align the jig on the workpiece. This way, it's quick to set up and there's no guess work involved.

Using this jig goes a long way toward routing accurate dados. But there are a few other things you can do to get the best results.

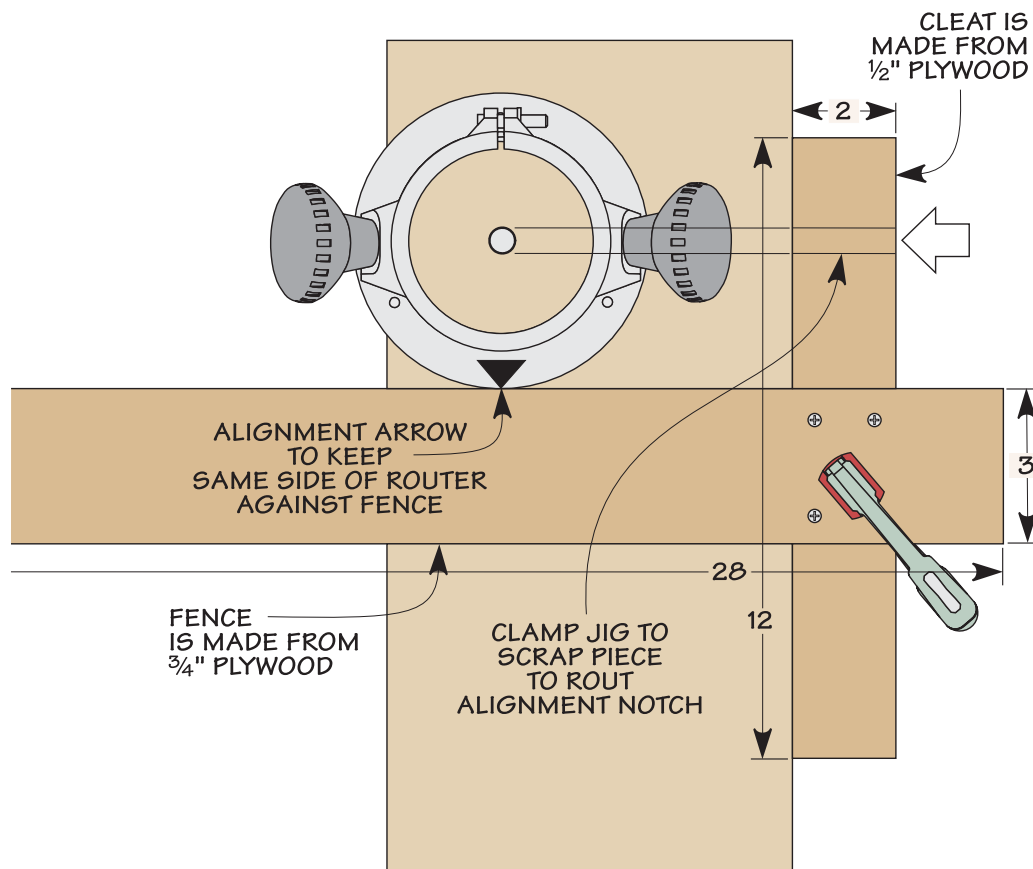
Router Setup. The first two things have to do with setting up your router. For example, I've found that the bases of some routers aren't

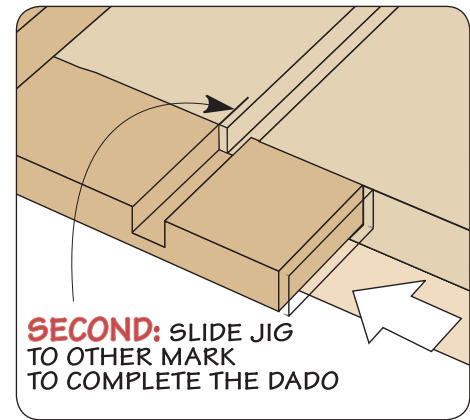
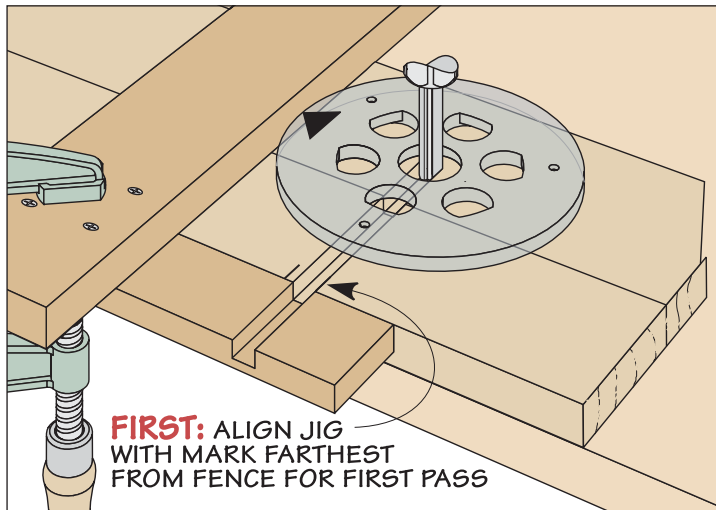
perfectly centered on the bit. This slight variation can lead to inaccurate results.

To get consistent results, I put an arrow on the router base (see drawing below). This allows me to easily keep the same side of the router against the fence.

The second step is to set the bit depth correctly. Taking too big of a bite places a lot of stress on the router motor and can overheat the bit. So I like to set the bit to take no more than a 1/4"-deep pass. For routing deeper dados and grooves, it's best to rout them in several, shallow passes.

Simple Router Jig





Using the Jig. At this point, you're ready to put the jig to work. Start by placing it on the workpiece with the edge of the notch on the layout line. Then clamp it in place. Note: On wide panels, it's a good idea to put a clamp on the both ends of the jig to keep it from shifting or flexing in use.

Routing Direction. Now, you can start routing. Start the router at the cleat end of the jig and rout in the direction shown in the photo on the facing page. In routing this way, the rotation of the bit will pull the router against the fence.

Here's a simple tip that can make routing go smoother: To prevent the power cord from getting hung up during a cut, drape the cord over your shoulder and hold it in your hand as you grip the router.

Making Dados Wider. Most of the time, a single-width pass is all that's necessary. But there are times when I need to rout a dado that's wider than the bit diameter.

It's easy to do this using the jig, but you want to make the cuts in the right order. Routing the dado in the wrong order causes you to backrout. This

can pull the router away from the fence and lead to a wavy, inaccurate cut.

The drawings at right show the order. Start by aligning the jig with the layout line farthest from the fence. After making a pass, reposition the jig to align with the other mark.

Another way to make a custom-sized dado or groove (to match the thickness of a plywood panel, for example), is to use the guides shown in the box below.

With either technique, you'll find that you can rout accurate dados and grooves in a short time. 🛠️

technique: Custom-fit Dadoes

Routing dadoes or grooves to hold a plywood panel can be a challenge. The problem is it measures a little less than the stated thickness. Whenever I need to rout a perfectly sized dado to match a piece of plywood, I turn to a pair of guides (see photo at right).

The guides consist of a hardboard base with a fence on top. I use the router and a 1/2" straight bit to trim the base of the guide.

Once you've made the guides, using them is straightforward. You can use a combination square to set one of the guides square to the edge of the workpiece. Then place a plywood spacer alongside the guide and clamp the second guide against the spacer.

Now, you can rout along one edge guide then turn the router around and make a return pass to complete the dado.



▲ **Two Guides.** Use two router guides to rout dadoes that exactly match your workpiece.

